CLAIMS

1. Method to identify an interference source in a mobile radio network, where a received signal **r** consists of a wanted signal and a number of interference signals of which one is a dominating interference signal and where all signals includes a known training sequence (TK1,TK2,…), by estimating the carrier and subtracting this carrier from the received signal (**r**), forming a remaining interference signal (**s**) and correlating said interference signal (**s**) against known training sequences (TKj, j=0,1,2,…,7) resulting in a determined training sequence associated with the interfering signal,

c h a r a c t e r i z e d in

finding an identification code (BCC) of a possible interference source (BS1) from said determined training sequence,
determining a number of candidates (CA1,CA2,…) each corresponding with a certain cell from said identification code (BCC) and the frequency which is disturbed;
determining the timing offset (t1,t2,… Fig 7) for the frequencies used by said candidates;
investigating if one or more (fa,fb…) of these have the same time offset as the interference signal (t0) resulting in that at least one candidate (CA3) with the best matching offsets on its frequencies is identified as the interference source.

2. Method according to claim 1, c h a r a c t e r i z e d in that said forming a remaining interference signal (**s**) consists in

estimating (1,2) both the training sequence and the data of the received signal (**r**),
generating (3) a channel model (**h**) by using said estimation of the training sequence and the data, said channel model being used to estimate (4) the carrier,
subtracting (6) the estimated carrier from the received signal **r**, leaving the remaining interference signal **s**.

3. Method as claimed in claim 2, wherein said estimated carrier is produced by filtering (4) the estimated bits through the channel model (**h**) obtained by said channel estimation.

4. Method as claimed in claim 1, c h a r a c t e r i z e d in determining a set of frequencies from said candidates (CA1,CA2,...) having the same time offset as the interference signal (t0) (Fig 7),
comparing this frequency set with the frequency set of the candidates, the candidate (CA3) having the frequencies which best match the frequency set is identified as the interference source.

5. Method as claimed in claim 1-3, where the serving cell uses a synchronization channel, c h a r a c t e r i z e d in that the step of investigating if one or more of these signals have the same time offset as the interference signal **s** includes further following steps:
determining the time offset of the interfered signal relative to the synchronisation channel,
measuring the offset for all signals on said candidate´s frequencies in relation to said synchronisation channel and if the offset so measured are the same for a number of said signals on certain frequencies these signals are assumed to have the same origin and the frequencies can be assigned to what is considered to be the interfering source.

6. Method as claimed in claim 1-3,c h a r a c t e r i z e d in the further following steps
for a defined time and for every training sequence, calculate the proportion, percent of interference of all samples that the training sequence had the strongest correlation, and visualising the percent of interference for all training sequences.

7. Method as claimed in claim 6,c h a r a c t e r i z e d in, for every sample, visualise (Fig 5) over time which training sequence that had the strongest correlation.

8. A method to eliminate false interference source candidates, where the time offset for the interference signal is known, and the training sequence and frequencies used by all interference source candidates are known,

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the time offset of all frequencies for all candidates are measured and compared to the time offset of the interference signal where the frequency or frequencies with the same time offset as in the interference signal are identified as originating from the interference source, which results in a set of frequencies, and identifying the candidate whose frequencies best match said frequency set as the interference source.